UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

May 26, 2015

Ms. Katherine Childs
MBW EIS Project Manager
1314 Harwood St. SE, Bldg. 212
Washington Navy Yard, DC 20374-5018

Re: Draft Environmental Impact Statement for Multiple Projects in Support of Marine Barracks Washington, D.C. (CEQ Number: 20150098)

Dear Ms. Childs:

In accordance with the National Environmental Policy Act (NEPA) of 1969, Section 309 of the Clean Air Act and the Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508), the U.S. Environmental Protection Agency has reviewed the Draft Environmental Impact Statement (DEIS) for Multiple Projects in Support of Marine Barracks Washington (MBW), D.C.

The purpose of the Proposed Action is to address existing and anticipated facility deficiencies at MBW within an approximately 5-year planning horizon from publication of the Record of Decision (ROD) which is anticipated early 2016. The principal project analyzed in this DEIS is the construction and potential land acquisition for a Bachelor Enlisted Quarters (BEQ) Complex (including supporting facilities and parking; the 212 parking spaces needed would either be retained at the Building 20 site or they would be replaced by new parking at the replacement BEQ Complex site, depending on the alternative selected). Additional projects evaluated include renovation and improvement projects to Building 7 and the MBW Main Post; improvements to the MBW Annex gate at 7th and K Streets; and improvements to building facades, fencing, infrastructure, pedestrian amenities, and landscaping throughout the installation. The Proposed Action is needed to better support the functions of the Marine Corps units assigned to MBW and, in the case of the BEQ Complex replacement project, to meet current requirements for adequate space and mission support functions; space configurations; Department of Defense quality of life standards; and life safety, sustainability, energy efficiency, and Anti-Terrorism and Force Protection (AT/FP) requirements.

The DEIS also takes a programmatic look at the potential effects of several additional projects anticipated to occur beyond the 5-year planning horizon for which information sufficient to conduct detailed NEPA analysis is not yet available. Principal among these projects is the

potential reuse of Building 20 or the Building 20 site. Other longer-term projects include renovation of Building 9 to accommodate the consolidation of various administrative functions, as well as some additional landscaping and maintenance projects. Once sufficient details on these actions become available to conduct a detailed analysis, additional NEPA analysis will be completed and applicable public involvement conducted.

Screening criteria was developed to refine and narrow the range of alternatives; they are: Criterion 1: walking distance of 2,000 foot radius of the Main Gate entrance to the MBW Main Post; Criterion 2: minimum developable area requirements for the 191,405 SF BEQ Complex (includes supporting facilities and parking) and in compliance with height restrictions laws; and Criterion 3: must not relocate public services to DC residents. The DEIS evaluated five action alternatives: Alternative 1 (Site A), Alternative 2 (Site B), Alternative 3 (Site C), Alternative 4 (Site D) and Alternative 5 (Site E) in addition to the No Action Alternative. The Marine Corps does not have a preferred alternative at this time. A preferred alternative will be identified in the Final EIS after regulatory consultations are complete and public comments on this DEIS are evaluated.

In general, the rating of an EIS is typically based on the lead agency's preferred alternative. With no Preferred Alternative identified, individual ratings for each alternative can be made. As is the case of MBW, EPA has rated all of the alternatives and the DEIS the same due to concerns with impacts to contaminated soils, surface water, stormwater management, groundwater, floodplains and greenhouse gas/climate change impacts. As a result, EPA rated the DEIS an EC-2 (Environmental Concerns/Insufficient Information), which indicates that we have environmental concerns regarding the proposal and that there is insufficient information in the document to fully assess the environmental impacts of this project. A copy of EPA's rating system can be accessed at the following site:
http://www.epa.gov/compliance/nepa/comments/ratings.html.

Thank you for the opportunity to review this project. If you have questions regarding these comments, the staff contact for this project is Karen DelGrosso; she can be reached at 215-814-2765.

Sincerely,

Barbara Rudnick
NEPA Team Leader
Office of Environmental Programs

Enclosures (2)

Technical Comments

Alternatives

For each of the alternatives described and for various location sites mentioned, "Squares" are used to identify areas. For instance, "Alternative 1, Site A, consists of 3.0 acres in Squares 929 and 930 and an approximate 340-foot segment of L Street between 8th and 9th Streets SE." "Alternative 2, Site B, consists of 1.8 acres composed of privately owned land at Square 976 and an approximate 315-foot segment of the L Street ROW between 10th and 11th Streets SE." "Alternative 3, Site C, is a 2.1 acres composed of a portion of Square 853, bound by M Street SE to the north and Tingey Street SE to the south." Under Alternative 4, the Marine Corps would establish a tenant site on 1.67 acres of federally owned land in the northern portion of Square 953, within the boundary of WNY." "Under Alternative 5, the Marine Corps would use 0.89 acre of federally owned land at Site E, which consists of Squares 881 and 881W within the boundary of the MBW Annex." Squares are also used in Section 5.0 Cumulative Impacts and Table 5.2-1, Projects Incorporated into the Cumulative Action Evaluation, page 5-4. Within these squares, various buildings will be demolished, etc. What is the significance of referencing areas as squares? If squares are to be used and provide a meaningful reference point, then maybe they should be depicted on a map. Please explain. It is not clear where buildings to be demolished are located on the alternative sites, etc. Maps of each site clearly depicting existing conditions (buildings, open space, etc.) and those buildings to be demolished or open space removed, etc. should be provided in the Final Environmental Impact Statement (FEIS).

In order to narrow the scope of alternatives, criterion were developed. Criteria 2 has established a minimum developable area requirement of approximately 191,405 SF for the BEQ Complex (which includes supporting facilities and parking) at a single site (while also complying with applicable laws governing height restrictions) or, for DOD-owned sites only, at a split site that retains the existing parking assets below Building 20 and replaces the remaining BEQ Complex functions (approximately 116,101 SF). All of the alternative sites fall below the criteria square footage requirement (191,405 SF for sites to include parking in design as well as those DOD-owned sites to use existing parking at Building 20). It is not clear in the DEIS as to why the other sites (A, B and C), would not rely on Building 20 for parking as it is in reasonable walking distance. This would reduce the size of the building footprint, possibly building height, result in less environmental impacts, etc. Please explain.

Page 3-36, Alternative 5 (Site E) includes the following contributing elements of the L-Enfant Plan: 6th Street viewshed, K Street viewshed, and an unnamed reservation (Figure 3.3-8). What is an unnamed reservation, where is it on the site, and how will the Proposed Action impact it?

Greenhouse Gas Emissions (GHG)

We recognize that the Draft EIS provides a quantitative estimate of greenhouse gas emissions from demolition and construction activities in Table 5.2-3, and that the emissions for the three years of activity total less than 500 metric tons of CO_2e. Since only one set of calculations are presented, it is not clear whether there are differences in projected estimates among each action alternative – we recommend that the Final EIS clarify this point and include emissions estimates for each action alternative. We also recommend against comparing the project's GHG emissions to the total U.S. GHG emissions in a particular year, as it is not clear that this comparison provides meaningful information.

If possible, the Final EIS should make clear if alternatives have considered and adjusted for resiliency to predicted climate change. EPA recognizes and commends the Marine Corps' intent to implement measures to conserve energy and to reduce GHG emissions, requiring base commanders to evaluate the effectiveness of incorporating emerging technologies. It would be helpful to specify and describe usable measures to reduce GHG emissions associated with the Proposed Action (both construction and operation). Please consider energy efficiency for construction and building design; see the enclosed Energy Efficiency document for a more comprehensive list of potential energy efficient measures.

Contaminated Sites and USTs

Page 3-53 states "Replacement BEQ Complex Site D (Alternative 4) is directly adjacent to the boundary of IRP Site 9, located at Buildings 219 and 220 and extending outward approximately 10 to 50 linear feet into the immediately surrounding area." The IRP site is covered by buildings, pavement, and other impervious surfaces and is currently used as office space. Constituents detected in subsurface soils at Site 9 include metals, semi-volatile organic compounds (SVOCs) and volatile organic compounds (VOCs), and PCBs." In addition, "It was determined by DON and the USEPA in 2007 that no further remedial action was necessary at the site based on remedial investigations (including the baseline human health and ecological risk assessment) of soil at these sites (DON 2007). Exposure scenarios for a future adult resident, future industrial worker, and future adolescent recreational user indicate no unacceptable human health risk is present (DON 2007)." If contaminants were found in the subsurface soils, can it be assumed that they may be in the groundwater as well? Please discuss. Are there potential indirect impacts that could result from construction at Site D? Are there any precautions/restrictions to development at Site D as a result of contamination at IRP Site 9? EPA is concerned that if there is a groundwater issue and construction is required below ground that there may be potential impacts. Again, please discuss.

Page 3-54 states that Alternative 3 (Site C) is adjacent to parcel D on its western boundary and that parcels D, K, and the Department of Transportation parcel are known areas of contaminated soil and groundwater. "Contaminants in soil included petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), PCBs, and metals, such as Pb, arsenic, and chromium. The main contaminants in the groundwater are benzene, toluene, ethylbenzene,

xylenes and naphthalene, and minor incidences of methyl tertiary-butyl ether. Most of the soil has been removed from parcels D, K, and the Department of Transportation parcel. Groundwater remediation continues on the Department of Transportation parcel, but was not considered necessary at parcel D as long as restrictions on extraction for drinking water supply are implemented through land use controls. Unexploded ordnance (UXO) were also located and removed from Parcel D (USEPA 2012b)." Where is parcel K and the Department of Transportation parcel in relation to Site C? All parcels (D, K and the Department of Transportation parcel) should be depicted on a map. What are the potential impacts that could result from construction at Site C with known contaminants in soils/groundwater from adjacent parcels? Are there any precautions/restrictions to development at Site C that should be implemented as a result of adjacent contaminated parcels?

Page 3-54 states, "MBW manages USTs at MBW properties in accordance with DOD, USEPA, and DC standards regulating UST. One UST is located within the Site E footprint. In addition, USTs were formerly located within the Site B footprint." The UST located within the Site E footprint should be depicted on a map and the EIS should discuss the condition of the UST and historical use (i.e., Identify substance stored (petroleum?). Were leaks reported? If so, what was the extent of the impact? What is the future use of the UST?).

In reference to Site B, please specify how many USTs were or are located on Site B. It is noted in the DEIS that "...a former leaking UST at the replacement BEQ Complex Site B (Alternative 2) has been closed by DDOE, with a determination of No Further Action based on the assessment that, if left in place, the site does not pose a threat to human health and/or the environment. Due to the potential for residual soil contamination, consultation with DDOE would be required prior to the commencement of earth disturbing activities at Site B (DDOE 2009)." If Site B were selected as the Preferred Alternative, would the former leaking UST remain in place or would it be removed? What contaminants are there and what are the exposure pathways?

Page 3-68 states, "Soil samples collected and analyzed for the Virginia Avenue Reconstruction project to the northwest of the study site showed arsenic, chromium, and SVOCs and levels higher than residential action levels, but lower than industrial action levels (FHWA and DDOT 2014)." Is there any concern or potential risk of this project on the Proposed Action, particularly at Sites A, B, and E (which are closest to the Virginia Avenue Reconstruction project)?

Floodplains

Page 3-70 states, "The majority of the land area included in Site C is located within the 100-year floodplain (approximately 1.9 acres) and the 500-year floodplain (approximately 0.19 acre). Only a small portion in the northeast corner of the site is not located within a floodplain (Figure 3.9-1). As part of the planning for SEFC redevelopment, Forest City, in conjunction with DDOE and FEMA, are proposing strategies to modify the 100-year line by implementing flood walls and filling certain areas." Please describe and quantify the area that may need to be

filled. Because this site would require modifying the 100-year floodplain to accommodate the proposed BEQ and since consultation with FEMA would be necessary, it would seem then that FEMA would have been included in the Distribution List. Please explain. Also, please discuss if necessary modifications would pose a risk to contaminated soils and groundwater on adjacent parcels D, K, and the Department of Transportation parcel.

Page 4-64 states, "In keeping with EO 11988, the Marine Corps would mitigate potential impacts resulting from construction in the floodplain. Mitigation could include using sewage and stormwater systems to eliminate backflow into floodwaters ..." EPA questions this form of mitigation as page 3-69 states,"...the Anacostia River has been subjected to industrial pollution and overflow from DC's combined sewer system...contributing to the serious decline of the ecological health of the river and the watershed as a whole." Thus, this form of mitigation may help with floodwaters, but would add to the pollution in the river? Is this a practical alternative? Are there other options for mitigation? Please discuss.

Surface Water/Stormwater Management

Page 3-69 states, "The Anacostia River is currently among the ten most contaminated rivers in the U.S., containing sewage, bacteria, metals, PAHs, and PCBs in addition to trash and other toxic contaminates. The primary source of PAHs in the Anacostia River is stormwater runoff, which has also led to high levels of petroleum-based hydrocarbons accumulating in the sediment." As noted on page 4-63 for Alternative 1 (and all other alternatives), "Stormwater would continue to be discharged into the combined sewer system."

Stormwater runoff in urban and developing areas is one of the leading sources of water pollution in the United States. In recognition of this issue, Congress enacted Section 438 of the Energy Independence and Security Act of 2007 (EISA) to require federal agencies to reduce stormwater runoff from federal development projects to protect water resources. More recently, the President signed Executive Order 13514 on Federal Leadership in Environmental, Energy, and Economic Performance calling upon all federal agencies to "lead by example" to address a wide range of environmental issues, including stormwater runoff. The Executive Order required the EPA, in coordination with other federal agencies, to publish Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under Section 438 of the Energy Independence and Security Act.

The intent of Section 438 of the EISA is to require federal agencies to develop and redevelop applicable facilities in a manner than maintains or restores stormwater runoff to the maximum extent technically feasible. Implementation of Section 438 of the EISA can be achieved through the use of the green infrastructure/low impact development (GI/LID) infrastructure tools described in the Technical Guidance (www.epa.gov/owow/nps/lid/section438). For more information on specific GI/LID practices and how they function, visit: www.epa.gov/greeninfrastructure and www.epa.gov/nps.lid. The intention of the statute is to maintain or restore the pre-development site hydrology during the development or redevelopment process. To be more specific, this requirement is intended to

ensure that receiving waters are not negatively impacted by changes in runoff temperature, volumes, durations and rates resulting from federal projects.

The fundamental principle of the Technical Guidance is to employ systems and practices that use or mimic natural processes to: 1) infiltrate and recharge, 2) evapotranspire, and/or 3) harvest and use precipitation near to where it falls to earth. Implementation of these new stormwater performance requirements in EISA Section 438 provides numerous environmental and economic benefits in addition to reducing the volume of stormwater runoff.

Please indicate and address how the Marine Corps will implement Section 438 of the EISA into the Proposed Action at Alternative Sites so as to minimize stormwater runoff into the combined sewer system which will ultimately add to the degradation of the Anacostia River.

Vegetation

Page 4-65 states that construction activities would remove vegetation at Site A and that the urban habitat loss that would occur during the period of construction would be replaced. The FEIS should specify and quantity the loss of all vegetation as a result of construction for all alternative sites.

Environmental Justice

Census tract 72 should be included as being an area of potential Environmental Justice Concern. Census Tract 71 was correctly identified as being an area of potential Environmental Justice Concern, but Census Tract 72 is more than 55 percent minority so it should be noted as being a census tract of EJ concern as well. This is evident for all alternatives as the Environmental Consequences section (pages 4-39, 4-40, 4-41) states that no proposed construction and renovation projects would occur in Census Trace 71. Census Tract 72 should have been included in this assessment. Please explain why Census Tract 72 was not identified. Additional detail is required in the assessment of potential impacts on communities of potential EJ concern to include Census Tract 72 in the assessment.

Transportation and Circulation

Table 2.8-1 shows Alterative 1 having a net loss of 11 parking spaces. However page 4-2 (and elsewhere in DEIS) states that if Alternative 1 is selected as the Preferred Alternative, it would result in a loss of 23 on-street parking spaces. Please explain the discrepancy of parking spaces lost for Alternative 1. It is assumed that with the reduction in parking demand due to the demolition of existing occupied land uses that the impact would be less than significant. It can be assumed that the parking spaces were used by the land uses to be removed. However, with the Virginia Avenue Park on one side of Alternative A site and the Richard Wright Public Charter School on the other side, the EIS should discuss whether park visitors and/or school employees, etc. would be impacted by the loss of on-street parking. Please discuss the potential impacts to these users as well as the possibility of considering mitigation measures for the loss.

Page 3-16 states, "Marked crosswalks and pedestrian countdown heads are provided for all pedestrian movements at each of the intersections in the study area. Although the traffic signals along 8th Street SE accommodate pedestrian movements, the signal timing favors vehicular traffic, and pedestrians have been observed to jaywalk instead of waiting for the pedestrian signal." Vehicle collisions with pedestrians have been documented at intersections in the study area. Although, MBW personnel are required to use crosswalks and comply with pedestrian signals, what other measures can be incorporated to ensure pedestrian safety? Has this specific issue been raised with the District Department of Transportation (DDOT), DC Office of Planning (DCOP) and/or National Capital Planning Commission (NCPC) to collaborate on the safest solution for pedestrian movement?

Page 3-17 states, "Although street lights are provided along both 7th Street SE and 8th Street SE where these roadways pass beneath the freeway, the relative isolation of these areas could pose a possible safety and security concern for pedestrians, particularly if they cross these areas during darkness." Page 4-8 states, "Military personnel (and some civilian workers) would pass beneath the I-695 overpass and adjacent to the existing surface lot along 8th Street SE." As this action would be common for all Alternative sites, it is important to ensure that the underpass is properly lit and if new lighting is needed, energy efficient lighting should be considered. The EIS should describe the underpass and its conditions to ensure safety for military personnel and pedestrians. In addition, since there will be increased foot traffic from any of the alternative sites to the Main Post, it is important to assess whether the existing sidewalks and crosswalks are compliant with the American Disabilities Act (ADA). Any detour routes due to construction should consider and accommodate access for those in need of ADA access.

The alternatives mention (page 4-15) "...given the number of military personnel travelling during the peak hours, and considering the availability of several transit routes in the area, this increase would be comparatively minor." It is not clear how this conclusion was derived. What is the typical peak hour for arrival and departure of the soldieries using the new site?

Alternative 1: According to Google Maps, bus lines DCN 22, DCPOTSKY, 90, 92, and 93 have the potential to be affected by the construction of Site A. The bus stops seems to be on the eastern side of the street on 8th Street SE between L Street and Virginia Avenue SE. Alternative 2: According Google Maps, bus lines 90, 92, 93, 735, A42, A46, A48, D300, and P5 have the potential to be affected by the construction of Site B. The construction of the site will most likely include disruption of the use of the existing sidewalk and affect the bus stop which is located at the northeast corner of M Street and 10th Street SE. The FEIS should account for all of the bus lines that are in the area (mentioned above).

In addition, the Transportation Impact Analysis states (page 6-1) "The Marine Corps would coordinate with Metro during the replacement BEQ site layout and design to ensure that the proposed design does not interfere with existing and planned transit service, including the location of transit stops and stations." Although construction impacts may be temporary, it is

important to inform the public of any changes to existing routes. Thus, prior to construction the public should be aware of the construction and its affect to the bus stops (i.e., notification of the changes to the bus stop locations) and reasonable accommodations should be made to those with disabilities that wish to use the bus stop.

Alternative 3 (Site C): According to Table 4.2-1 (page 4-11), the increase in delay for the M Street SE/Isaac Hull Avenue SE does not change the Level of Service (LOS) rating (C) for the intersection (from 24.9 seconds for the No Action Alternative to 25.2 seconds for Alternative 3). These is no discussion if the two lane security gate was calculated in the traffic assessment. With only one through lane and an additional 212 cars (those parking in the new BEQ) using the entrance, it is surprising that the increase in cars will only affect the intersection by .3 seconds from the No Action Alternative. Please explain.

Parking for Site D will be located in Building 20 which would create additional foot traffic coming in and out of the main gate of WNY. This additional foot traffic should be considered in the intersection traffic for M Street SE and Isaac Hull Avenue.

Cumulative Impacts

Page 5-12 discusses the Hine Junior High School Redevelopment project located at 335 8th Street SE which was to include office space, retail space, residential units and parking units. Construction was estimated to be completed in September 2014. Has this project been completed?

Pages 5-14 and 5-15 state that the M Street Southeast/Southwest Transportation Planning Study anticipated beginning a formal NEPA process in 2014. If this project had commenced NEPA, please indicate in the FEIS.

Page 5-15 discusses the DC Streetcar project in which the NEPA process was anticipated to begin in 2014. Did this project commence?

Since it is not certain if the above projects have been completed, are in the process of construction, or operation, EPA is concerned with simultaneous construction activities and cumulative impacts. Please explain. It would be helpful if all of the Other Actions Affecting the Resources of Concern mentioned on pages 5-3 through 5-16 were depicted on a map to see where they are in relation to the alternative sites.

Miscellaneous

Page 4-8, first sentence at the top of the page may be corrected to read, "A project may cause a significant impact to parking facilities if the net parking demand exceeds the available supply of spaces."

Page 5-27 states, "Table 5.2-2 summaries the net change in annual GHG emissions that would occur from each year of construction compared to the GHG emissions inventories for the U.S. baseline." The correct table referenced should be Table 5.2-3 (not Table 5.2-2).

Energy Efficiency

Executive Order (EO) 13514 *Federal Leadership in Environmental, Energy, and Economic Performance* was signed on October 5, 2009. The purpose of EO 13514 is "to establish an integrated strategy towards sustainability in the Federal Government and to make reduction of greenhouse gas emissions (GHG) a priority for Federal agencies." The EO does not rescind/eliminate the requirements of EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. Instead, it expands on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423. EO 13514 sets numerous Federal energy requirements in several areas, including:

- Accountability and Transparency
- Strategic Sustainability Performance Planning
- Greenhouse Gas Management
- Sustainable Buildings and Communities
- Water Efficiency
- Electronic Products and Services
- Fleet and Transportation Management
- Pollution Prevention and Waste Reduction

The summary below is intended as a reference only. Please refer to the full text of EO 13514 for specific numerical and non-numerical targets for Federal agencies to reach and show how project planning incorporates EO 13514 requirements, where applicable.

Accountability and Transparency

EO 13514 accountability, transparency, and reporting requirements include: Within 30 days, Federal agency heads must designate a senior management official to serve as Senior Sustainability Officer accountable for agency conformance. The Senior Sustainability Officer designation must be reported to the Chair of the Council on Environmental Quality (CEQ) and the Director of the Office of Management and Budget (OMB). The Senior Sustainability Officer shall:

- Prepare targets for agency-wide reductions in 2020 for greenhouse gas (GHG) emissions.
- Within 240 days, prepare and submit a multi-year Strategic Sustainability Performance Plan to the Chair of the Council on Environmental Quality (CEQ) and the Director of the Office of Management and Budget (OMB) for review and approval.
- Agency efforts and outcomes in implementing EO 13514 must be transparent and disclosed on publicly available Federal Web sites.
- OMB must prepare scorecards providing periodic evaluation of Federal agency performance. Scorecard results must be published on a publicly available Web site.
- The CEQ Chair must ensure that Federal agencies are held accountable for conforming to the requirements of EO 13514.
- Agency heads shall decide that this order applies in whole or in part with respect to the activities, personnel, resources, and facilities of the agency not located within the U.S. if

determined that such application is in the interest of the U.S.

- Agency heads may submit to the President, through the CEQ Chair, an exemption request covering an agency activity and related personnel, resources, and facilities.
- The Director of National Intelligence may exempt an intelligence activity and related personnel, resources, and facilities when in the interest of national security.
- To the maximum extent practical and without compromising national security, each agency shall strive to comply with the purposes, goals, and implementation steps of EO 13514.

Strategic Sustainability Performance Planning

Federal agencies are required to develop, implement, and annually update a Strategic Sustainability Performance Plan that prioritizes agency actions based on life-cycle return on investment. Between fiscal years 2011 and 2021, each plan shall:

- Include a policy statement committing the agency to comply with environmental and energy statutes, regulations, and executive orders.
- Achieve established sustainability goals and targets, including greenhouse gas reduction targets.
- Be integrated within each agency's strategic planning and budgeting process.
- Identify agency activities, policies, plans, procedures, and practices relevant to the implementation of EO 13514 and, where necessary, provide for development and implementation of new or revised policies, plans, procedures, and practices.
- Identify specific agency goals, schedules, milestones, and approaches for achieving results and quantifiable metrics required by EO 13514.
- Outline planned actions to provide information about agency progress, performance, and results on a publicly available Federal Web site.
- Incorporate actions for achieving progress metrics identified by the CEQ Chair and OMB Director.
- Evaluate agency climate change risks and vulnerabilities to manage the effects of climate change on the agency's operations and mission in both the short and long term.
- Consider environmental measures as well as economic benefits, social benefits, and costs in evaluating projects and activities based on life-cycle return on investment.
- Annually identify opportunities for improvement and evaluate past performance to extend or expand projects that have net benefits as well as reassess or discontinue under-performing projects.

The CEQ Chair and OMB Director are responsible for reviewing and approving each agency's multi-year strategic sustainability performance plan.
A list of all Strategic Sustainability Plans for each agency is available on the OMB Web site.

Greenhouse Gas Management

Greenhouse gas management is imperative within E.O. 13514. Each Federal agency must:

- Within 90 days, establish and report to the CEQ Chair and OMB Director a fiscal year 2020 percentage reduction target of agency-wide scope 1 and scope 2 GHG emissions in absolute terms relative to a fiscal year 2008 baseline.
- In establishing the target, agencies shall consider reductions associated with:

        - Reducing agency building energy intensity.
        - Increasing agency renewable energy use and on-site projects.
        - Reducing agency use of fossil fuels by:
            - Using low GHG emitting and alternative fuel vehicles.
            - Optimizing vehicle numbers across agency fleets.
            - Reducing petroleum consumption in agency fleets of 20 or more 2% annually through fiscal year 2020 relative to a fiscal year 2005 baseline.
    - Where appropriate, this target shall exclude direct emissions from excluded vehicles and equipment as well as electric power produced and sold commercially to other parties in the course of regular business.
    - Within 240 days, establish and report to the CEQ Chair and OMB Director a fiscal year 2020 percentage reduction target for agency-wide scope 3 GHG emissions in absolute terms relative to a fiscal year 2008 baseline.
        - In establishing the target, agencies shall consider reductions associated with:
            - Pursuing opportunities with vendors and contractors to address and incentivize GHG emission reductions.
            - Implementing strategies and accommodations for transit, travel, training, and conferences that actively reduce carbon emissions associated with commuting and travel by agency staff.
            - Meeting greenhouse gas emissions reductions associated with other Federal Government sustainability goals.
            - Implementing innovative policies and practices that address agency-specific scope 3 GHG emissions.
    - Within 15 months, establish and report to the CEQ Chair and OMB Director a comprehensive inventory of absolute GHG emissions across all three scopes for fiscal year 2010. Comprehensive inventories shall be submitted annually thereafter at the end of each January.

Sustainable Buildings and Communities

Federal agencies must enhance efforts towards sustainable buildings and communities. Specific requirements include:

- Implement high performance sustainable Federal building design, construction, operation and management, maintenance, and deconstruction by:
    - Ensuring all new Federal buildings, entering the design phase in 2020 or later, are designed to achieve zero net energy by 2030.
    - Ensuring all new construction, major renovations, or repair or alteration of Federal buildings comply with the Guiding Principles of Federal Leadership in High Performance and Sustainable Buildings.
- Ensuring at least 15% of existing agency buildings and leases (above 5,000 gross square feet) meet the Guiding Principles by fiscal year 2015 and that the agency makes annual progress towards 100% compliance across its building inventory.
- Pursuing cost-effective, innovative strategies (e.g., highly-reflective and vegetated roofs) to minimize consumption of energy, water, and materials.
- Managing existing building systems to reduce the consumption of energy, water, and

materials, and identifying alternatives to renovation that reduce existing asset deferred maintenance costs.

- When adding assets to agency building inventories, identifying opportunities to:
  - Consolidate and eliminate existing assets.
  - Optimize the performance of portfolio property.
  - Reduce associated environmental impacts.
- Ensuring rehabilitation of Federally-owned historic buildings utilizes best practices and technologies in retrofitting to promote long-term viability of the building.
- Advance regional and local integrated planning by:
  - Participating in regional transportation planning and recognizing existing community transportation infrastructure.
  - Aligning Federal policies to increase the effectiveness of local planning for energy choices such as locally-generated renewable energy.
  - Ensuring that planning for new Federal facilities and leases consider sites that are pedestrian friendly, near existing employment centers, and accessible to public transport; and emphasize existing central cities and, in rural communities, existing or planned town centers.
  - Identify and analyze impacts from energy usage and alternative energy sources in all environmental impact statements and environmental assessments for proposals covering new or expanded Federal facilities under the amended National Environmental Policy Act (NEPA) of 1969.

Water Efficiency

Federal agencies must improve water efficiency and management by:

- Reducing potable water consumption intensity 2% annually through fiscal year 2020, or 26% by the end of fiscal year 2020, relative to a fiscal year 2007 baseline.
- Reducing agency industrial, landscaping, and agricultural water consumption 2% annually, or 20% by the end of fiscal year 2020, relative to a fiscal year 2010 baseline.
- Identifying, promoting, and implementing water reuse strategies consistent with state law that reduce potable water consumption.

Electronic Products and Services

EO 13514 includes product efficiency and stewardship. Federal agencies must:

- Ensure 95% of new contract actions, task orders, and delivery orders for products and services (excluding weapon systems) are energy efficient (ENERGY STAR® or FEMP-designated), water efficient, bio-based, environmentally preferable (Electronic Product Environmental Assessment Tool (EPEAT) certified), non-ozone depleting, contain recycled content, or are non-toxic or less-toxic alternatives where such products and services meet agency performance requirements.
- Implement best management practices for the energy-efficient management of servers and Federal data centers.

Fleet and Transportation Management

EO 13514 requires Federal agencies to consider fleet and transportation management during greenhouse gas inventory and mitigation processes. Specific details are outlined in the Greenhouse Gas Management section of this page.

Pollution Prevention and Waste Reduction

E.O. 13514 includes the following pollution prevention and waste reduction requirements for Federal agencies:

- Minimize the generation of waste and pollutants through source reduction.
- Decrease agency use of chemicals where such decrease will assist the agency in achieving greenhouse gas reduction targets.
- Divert at least 50% of non-hazardous solid waste by the end of fiscal year 2013.
- Reduce printing paper use and acquiring uncoated printing and writing paper containing at least 30% post-consumer fiber.
- Increase the diversion of compostable and organic material from the waste stream.